IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ullas Gargi
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Title : ORGANIZING A COLLECTION OF OBJECTS

Art Unit : 2169
Examiner : Pham, Hung Q
Confirmation No.: 2127

Commissioner for Patents
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APPEAL BRIEF

I. Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. Related Appeals and Interferences

Appellant is not aware of any related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-23 and 27-51, which are the subject of this appeal, are pending.

Claims 24-26 are canceled.

Claims 1-23 and 27-51 stand rejected.

CERTIFICATE OF TRANSMISSION

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Appellant appeals all rejections of the pending claims 1-23 and 27-51.

IV. Status of Amendments

The amendments filed March 11, 2009, have been entered and acted upon by the Examiner.

No amendments were filed after the final Office action dated July 28, 2009.

V. Summary of Claimed Subject Matter

In the following Summary, the citations in parentheses are representative of support provided in the application.

A. Independent claim 1

The aspect of the invention defined in independent claim 1 is a method of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects (see page 8, lines 16-17; FIG. 3). The method comprises operating a processor (page 6, lines 14-20; FIG. 1) to perform operations comprising the following operations. The objects in the sequence are classified to generate a series of object clusters (see, e.g., page 5, lines 22-25, page 7, lines 22-24, and page 13, lines 1-2). The classifying comprises sequentially processing each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series (see page 9, lines 10-14; FIG. 3, step 174). For each of the candidate objects, a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster is determined (see page 9, lines 14-17) The candidate object interval is measured in the selected dimension of the context-related metadata (see page 9, lines 18-27). For each of the candidate objects, the candidate object interval is compared to a weighted measure of cluster extent for the current object cluster (see page 9, lines 14-17; FIG. 3, block 178). The measure of cluster extent corresponds to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata (see page 9, lines 27-30). For each of the candidate objects, the candidate object interval is compared to a weighted

measure of object density for the current object cluster (see page 10, line 32 - page 11, line 2; FIG. 3, block 208). The measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata (see page 11, lines 2-11).

B. Dependent claim 8

Claim 8 depends from claim 1 and recites that the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters (page 9, line 31 - page 10, line 31; FIGS. 4A and 4B).

C. Dependent claim 10

Claim 10 depends from claim 1 and recites that the method further comprises customizing at least one of the weights applied to the measures of cluster extent based on an analysis of objects in the corresponding object cluster (page 14, lines 9-33).

D. Dependent claim 20

Claim 20 depends from claim 19 and recites that the processing further comprises processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end (page 12, line 29 - page 13, line 2).

E. Independent claim 22

The aspect of the invention defined in independent claim 22 is a system of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects (see page 8, lines 16-17; FIG. 3). The system comprises a computer-readable medium storing computer-readable instructions, and a data processing unit coupled to the memory, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising the following operations (page 6, line 14 - page 7, line 12; FIG. 1). The objects in the sequence are classified to generate a series of object clusters (see, e.g., page 5, lines 22-25, page 7, lines 22-24, and page 13, lines 1-2). The classifying

comprises sequentially processing each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series (see page 9, lines 10-14; FIG. 3, step 174). For each of the candidate objects, a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster is determined (see page 9, lines 14-17) The candidate object interval is measured in the selected dimension of the context-related metadata (see page 9, lines 18-27). For each of the candidate objects, the candidate object interval is compared to a weighted measure of cluster extent for the current object cluster (see page 9, lines 14-17; FIG. 3, block 178). The measure of cluster extent corresponds to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata (see page 9, lines 27-30). For each of the candidate objects, the candidate object interval is compared to a weighted measure of object density for the current object cluster (see page 10, line 32 - page 11, line 2; FIG. 3, block 208). The measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata (see page 11, lines 2-11).

F. Independent claim 23

The aspect of the invention defined in independent claim 23 is a method of organizing a collection of objects (FIG. 6; page 15, lines 7-8). The method comprises operating a processor to perform operations comprising the following operations (page 6, lines 14-20; FIG. 1). Objects from the collection are segmented into clusters (see page 15, line 8; FIG. 6, step 230). Context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy is extracted (see page 15, lines 10-12; FIG. 6, step 232). Names are assigned to clusters based on the extracted context-related meta data corresponding to a level of the name hierarchy selected to distinguish segmented clusters from one another (see page 16, lines 7-10; FIG. 6, step 234).

G. Independent claim 32

The aspect of the invention defined in independent claim 32 is a system of organizing a collection of objects. The system comprises a computer-readable medium storing computer-readable instructions, and a data processing unit coupled to the memory, operable

to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising the following operations (page 6, line 14 - page 7, line 12; FIG. 1). Objects from the collection are segmented into clusters (see page 15, line 8; FIG. 6, step 230). Context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy is extracted (see page 15, lines 10-12; FIG. 6, step 232). Names are assigned to clusters based on the extracted context-related meta data corresponding to a level of the name hierarchy selected to distinguish segmented clusters from one another (see page 16, lines 7-10; FIG. 6, step 234).

H. Independent claim 33

The aspect of the invention defined in independent claim 33 is a method of organizing a collection of objects (FIG. 9). The method comprises operating a processor to perform operations comprising the following operations (page 6, lines 14-20; FIG. 1). A sequence of objects segmented into clusters is accessed, where each of the clusters includes multiple constituent objects arranged in a respective sequence in accordance with context-related meta data associated with the objects (page 18, lines 26-31). For each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence are selected (see page 18, lines 31-33; FIG. 9, the layout engine 164 selects as representative objects the first and last objects 242, 244 and 246, 248 of a pair of neighboring clusters 250 and 252, respectively). In a user interface, the selected representative objects of each cluster are graphically presented without graphically presenting representations of unselected ones of the constituent objects of the clusters (see page 19, lines 5-7; FIG. 9, the user interface 240 graphically presents the selected representative objects 242-248).

I. Dependent claim 38

Claim 38 depends from claim 37 and recites that objects of one cluster are merged into an adjacent cluster in response to dragging and dropping of the objects to be merged (page 19, lines 18-29).

J. Dependent claim 50

Claim 50 depends from claim 33 and recites that the method further comprises graphically presenting at least one link to an object of a cluster arranged in a sequence in accordance with location-related meta data in a map format (page 22, lines 16-26).

K. Independent claim 51

The aspect of the invention defined in independent claim 51 is a system of organizing a collection of objects. The system comprises a computer-readable medium storing computer-readable instructions, and a data processing unit coupled to the memory, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising the following operations (page 6, line 14 - page 7, line 12; FIG. 1). A sequence of objects from the collection segmented into clusters is accessing, where each of the clusters includes multiple objects arranged in a respective sequence in accordance with context-related meta data associated with the objects (page 18, lines 26-31). For each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence are selected (see page 18, lines 31-33; FIG. 9, the layout engine 164 selects as representative objects the first and last objects 242, 244 and 246, 248 of a pair of neighboring clusters 250 and 252, respectively). In a user interface, the selected representative objects of each cluster are graphically presented on a screen without graphically presenting representations of unselected ones of the constituent objects of the clusters (see page 19, lines 5-7; FIG. 9, the user interface 240 graphically presents the selected representative objects 242-248). The selected representative objects are presented with the spacing between adjacent ones of the selected representative objects in the same cluster smaller than the spacing between adjacent ones of the selected representative objects in different clusters (see page 19, lines 6-7; FIG. 9).

VI. Grounds of Rejection to be Reviewed on Appeal

A. Claims 1-19, 21-23, 27-37, 39-49, and 51 are rejected under 35 U.S.C. § 102(b) over Graham ("Time as Essence for Photo Browsing Through Personal Digital Libraries").

B. Claims 20, 38, and 50 are rejected under 35 U.S.C. § 103(a) over Graham ("Time as Essence for Photo Browsing Through Personal Digital Libraries").

VII. Argument

A. Claim rejections under 35 U.S.C. § 102(b)

Claims 1-19, 21-23, 27-37, 39-49, and 51 are rejected under 35 U.S.C. § 102(b) over Graham ("Time as Essence for Photo Browsing Through Personal Digital Libraries").

1. Applicable standards for sustaining a rejection under 35 U.S.C. § 102(b)

The relevant part of 35 U.S.C. § 102(b) recites that "A person shall be entitled to an invention, unless - … the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Anticipation under 35 U.S.C. § 102(b) requires that each and every element of the claimed invention be present, either expressly or inherently, in a single prior art reference. EMI Group N. Am., Inc. v. Cypress Semiconductor Corp., 268 F.3d 1342, 1350 (Fed. Cir. 2001). Anticipation must be proved by substantial evidence. In re Crish, 393 F.3d 1253, 73 USPQ2d 1364 (Fed. Cir. 2004).

2. Independent claim 1

Claim 1 recites:

> 1. A method of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects, comprising operating a processor to perform operations comprising:

classifying the objects in the sequence to generate a series of object clusters, wherein the classifying comprises sequentially processing each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series and, for each of the candidate objects,

determining a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster, the candidate object interval being measured in the selected dimension of the context-related metadata,

comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and

comparing the candidate object interval to a weighted measure of object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata.

The rejection of claim 1 under 35 U.S.C. § 102(b) over Graham should be withdrawn because Graham does not expressly nor inherently disclose each and every element of the claim.

For example, Graham does not expressly nor inherently disclose "comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata," as recited in claim 1.

The Examiner has taken the position that Graham discloses this element of claim 1 on page 4, col. 2, lines 3-28 (see pages 10-11 of the final Office action). In pertinent part, the Examiner has stated that (pages 10-11 of the final Office action; emphasis added):

> …Every time two consecutive photographs differ by more than a specified constant time difference, e.g., 1 hour difference, a new cluster is created and the current image is added to the most recently created cluster (Graham, Page 4, Col. 2 Lines 3-28). In view of Graham's teaching, for example, a list of photographs is sorted by recorded time as: T1 (7:30Am)-T2 (7:32Am)-T3 (9:30 Am)-T4 (9:45Am)-T5 (10:07Am) ... wherein T1, T2 ... represent photographs, and each photograph has a corresponding recorded time. If greater than 60 minutes is specified as a constant time difference between two consecutive photographs as taught by Graham, a first initial clusters C1 will be created for {T1, T2}, because the difference between T1-T2 is 2 minutes and less than 60 minutes, wherein the difference between T2 and T3 is 118 minutes. T3 will be processed against T4 and in the same manner to the end of the sorted list. In short, the Graham's technique reads on the claimed limitation comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, e.g., time interval between two consecutive photographs such as T1 and T2 is compared with specified constant time difference such as greater than 60 minutes for the current cluster C1, <u>the measure of cluster extent, e.g., the maximum time difference of every two consecutive objects such as T1-T2 in C1, corresponding to a current distance, e.g., the maximum time difference of every two consecutive objects such as T1-T2 corresponds to equal of less than 60 minutes distance, spanned by all the objects in the current object cluster, e.g., equal or less than 60 minutes distance is spanned from every consecutive photographs in C1</u>, measured in the selected dimension of the context-related metadata, e.g., the maximum 60 minutes is time measurement)…

Thus, the Examiner's rejection of claim 1 under 35 U.S.C. § 102(b) is premised on his assumption that the one hour time difference disclosed on page 4, col. 2, lines 3-28, constitutes "the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata," recited in claim 1. Contrary to the Examiner's assumption, however, the one hour time difference is the time difference that was "used during initial clustering" (see page 4, col. 2, lines 24-28 of Graham). This time difference is a "constant time difference" (page 4, col. 2, line 9) that represents "the time differences <u>between</u> the initial clusters" (page 4, col. 2, line 23; emphasis added). The one-hour fixed time difference between the initial clusters does not constitute a "measure of cluster extent corresponding to a current distance

spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata," recited in claim 1. Indeed, in Graham's approach, the measure of cluster extent of a given cluster is variable and corresponds to the capture time difference between the first and last ones of the consecutive photographs that added to the current cluster, which may be less than, equal to, or greater than the specified constant time difference between the initial clusters.

The Examiner has replied to the explanation presented in the preceding paragraph in pages 3-5 of the final Office action. The crux of the Examiner's reply is as follows (page 4; second ¶ of the final Office action; original emphasis):

> The clustering in Graham's technique is based on time from photo's metadata. Time is considered as being equivalent to the claimed **selected dimension of context-related metadata**. The Graham's time interval between two consecutive photographs is considered as being equivalent to the claimed **candidate object interval**. The Graham's specified constant time difference, e.g., greater than 60 minutes, is considered as being equivalent to the claimed **a weighted measure of cluster extent**. The maximum time difference of every two consecutive objects in a cluster, e.g., equal or less than 60 minutes of T1-T2 in C1, is considered as being equivalent to the claimed the **measure of cluster extent**. The maximum time difference of T1 and T2 corresponds to **a current distance**, e.g., 60 minutes, **spanned by all the objects in the current object cluster**, e.g., equal or less than 60 minutes distance is spanned from every consecutive photographs in C1. The maximum 60 minutes is time measurement or **the selected dimension of context-related metadata**.

The Examiner's argument is premised on the flawed assumption that "Graham's specified constant time difference, e.g., greater than 60 minutes, is considered as being equivalent to the claimed a weighted measure of cluster extent." Claim 1 expressly defines "the measure of cluster extent" as "corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata." In the first paragraph on page 4 of the final Office action, the Examiner has presented an example in which the current candidate object interval between consecutive objects T1 and T2 is given by T1-T2 = 2 minutes. In this example, the current object interval is compared to the constant time difference between clusters (i.e., 60 minutes). Since the

current time interval is less than this constant time difference between clusters, T1 and T2 are placed in the same cluster. In this case, however, the "current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata" is not 60 minutes, as asserted by the Examiner; instead, the current distance spanned by all the objects (i.e., T1 and T2) in the current cluster is 2 minutes. Graham neither expressly nor inherently discloses that the next candidate object interval (i.e., T2-T3) is compared to a weighted measure of cluster extent for the current object cluster (i.e., 2 minutes). To the contrary, as acknowledged by the Examiner, Graham always compares the current candidate object interval to the constant time difference between clusters (i.e., 60 minutes).

The Examiner's argument also is premised on the incorrect assumption that "The maximum time difference of T1 and T2 corresponds to a current distance, e.g., 60 minutes, spanned by all the objects in the current object cluster, e.g., equal or less than 60 minutes distance is spanned from every consecutive photographs in C1." This assumption is flawed for the following reasons.

First, the Examiner assertion that the range "equal or less than 60 minutes" constitutes a "current distance" between two consecutive photographs is wrong. In the context of claim 1, the ordinary and accustomed meaning of the word "distance" is the degree or amount of separation (see Merriam-Webster's Collegiate Dictionary, Tenth Edition 1995, definitions 2a and 2b: "separation in time," and "the degree or amount of separation between two points, lines, surfaces, or objects). The range "equal or less than 60 minutes" is not a current distance. In the Examiner's example, the current distance between T1 and T2 in the time dimension is 2 minutes and the current distance between T2 and T3 is 118minutes, neither of these distances is "equal or less than 60 minutes."

Second, the Examiner's assertion that the maximum time difference between the objects in a current cluster is "equal or less than 60 minutes" is wrong. As explained above, the one hour time difference is the time difference that is "used during initial clustering" (see page 4, col. 2, lines 24-28 of Graham) and is a "constant time difference" (page 4, col. 2, line 9) that represents "the time differences <u>between</u> the initial clusters" (page 4, col. 2, line 23; emphasis added). Contrary to the Examiner's assertion, there is no maximum time difference spanned by all the objects in the current object cluster. For example, assume for the purpose of argument that there are 100 photographs taken consecutively at one minute intervals. In

this example, Graham's method would add all 100 of the photographs to the current cluster because the time difference between consecutive photographs is 1 minute, which is less than the 60 minute constant time difference between clusters. In this case, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata is 100 minutes, not "equal or less than 60 minutes" as asserted by the Examiner.

For at least these reasons, the rejection of independent claim 1 under 35 U.S.C. § 102(b) over Graham should be withdrawn.

3. Claims 2-19 and 21

a. Introduction

Each of claims 2-19 and 21 incorporates the elements of independent claim 1 and therefore is patentable over Graham for at least the same reasons explained above.

Claims 8 and 10-11 also are patentable over Graham for the following additional reason:

b. Claim 8

Claim 8 depends from claim 1 and recites that the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

In support of the rejection of claim 8 under 35 U.S.C. § 102(b) over Graham the Examiner has taken the position that Graham discloses all the elements of claim 8 in page 3, col. 2, lines 1-10 (see page 13, bottom ¶ of the final Office action). Contrary to the Examiner's position, however, the cited section does not disclose anything whatsoever about a weighted measure of cluster extent, much less does it disclose "determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters." Indeed, in page 3, col. 2, lines 1-10, Graham discloses:

> In many cases, we can derive even more specific information about the set of photographs in a cluster. Much as we were able to identify the "Birthday burst" by noticing an increased rate of

> activity, we are able to identify "sub-bursts" by comparing relative rates of activity within the cluster. For example, the rate at which pictures are taken is likely to be higher when someone is opening presents or blowing out candles on a cake. By encoding these sub-events within our cluster structure, we gain an even more accurate portrayal of the collection.

This disclosure of "comparing relative rates of activity within the cluster" has nothing whatsoever to do with a measure of cluster extent.

For this additional reason, the rejection of claim 8 under 35 U.S.C. § 102(b) over Graham should be withdrawn.

c. Claims 10-11

Claim 10 depends from claim 1 and recites that the method further comprises customizing at least one of the weights applied to the measures of cluster extent based on an analysis of objects in the corresponding object cluster.

In support of the rejection of claim 10 under 35 U.S.C. § 102(b) over Graham the Examiner has taken the position that Graham discloses all the elements of claim 10 in page 4, col. 2, lines 19-28 (see page 14, first ¶ of the final Office action). Contrary to the Examiner's position, however, the cited section does not disclose anything whatsoever about a weighted measure of cluster extent, much less does it disclose "customizing at least one of the weights applied to the measures of cluster extent based on an analysis of objects in the corresponding object cluster." Indeed, in page 4, col. 2, lines 19-28, Graham discloses:

> In step 2 of the clustering process, these initial clusters are split into finer clusters based on the time differences between photographs within each initial cluster. In step 3, the initial clusters are combined into more general clusters based on the time differences between the initial clusters. Thus, the final cluster tree is not heavily dependent on the specific time difference used during initial clustering. We found that choosing initial time differences between 1 and 24 hours resulted in similar final cluster trees. Our current prototype uses an initial time difference of 1 hour.

As explained above in connection with independent claim 1, "the time differences between the initial clusters" do not constitute measures of cluster extent.

For this additional reason, the rejection of claim 10 under 35 U.S.C. § 102(b) over Graham should be withdrawn.

Claim 11 depends from claim 10 and therefore is patentable over Graham for at least the same additional reason explained above in connection with claim 10.

4. Independent claim 22

Independent claim 22 recites elements that essentially track the pertinent elements of independent claim 1 discussed above. Therefore, independent claim 22 is patentable over Graham for at least the same reasons explained above in connection with independent claim 1.

5. Independent claim 23

Independent claim 23 recites:

> Claim 23 (previously presented): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:
>
> segmenting objects from the collection into clusters;
>
> extracting context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy; and
>
> assigning names to clusters based on the extracted context-related meta data corresponding to a level of the name hierarchy selected to distinguish segmented clusters from one another.

The rejection of claim 23 under 35 U.S.C. § 102(b) over Graham should be withdrawn because Graham does not expressly nor inherently disclose each and every element of the claim. For example, Graham does not expressly nor inherently disclose the "assigning" element of claim 23.

In support of the rejection of claim 23, the Examiner has taken the position that Graham discloses the "extracting" element of claim 23 on page 3, col. 2, line 39 - page 4, col. 1, line 2; page 4, col. 1, lines 8-13; page 5, col. 1, lines 16-29, and discloses the "assigning" element of claim 23 on page 2, FIG. 1a and 1B (see page 16 the final Office action).

Regarding the "extracting" element of claim 23, the cited sections of Graham only suggest in pertinent part that GPS metadata "could also be extracted" and that "It is equally easy to cluster the data based on location."

Regarding the "assigning" element of claim 23, the cited sections of Graham only disclose in pertinent part elements of the calendar browser in which clusters are combined based on a fixed year-month-day hierarchy (see page 5, step 3). The fixed year-month-day hierarchy, however, does not constitute "context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy," as recited in claim 23. Moreover, assigning names to clusters based on a fixed year-month-day hierarchy does not constitute a teaching of assigning names to clusters based on context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy, where the assigned names correspond to a level of the name hierarchy selected to distinguish segmented clusters from one another. Graham's mere suggestion that GPS metadata "could also be extracted" and that "It is equally easy to cluster the data based on location" does not expressly nor inherently disclose any whatsoever about assigning names to clusters, much less does it expressly or inherently disclose assigning names to clusters based on context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy, where the assigned names correspond to a level of the name hierarchy selected to distinguish segmented clusters from one another.

For at least these reasons, the rejection of independent claim 23 under 35 U.S.C. § 102(b) over Graham should be withdrawn.

6. Claims 27-31

Each of claims 27-31 incorporates the elements of independent claim 23 and therefore is patentable over Graham for at least the same reasons explained above.

7. Independent claim 32

Independent claim 32 recites elements that essentially track the pertinent elements of independent claim 23 discussed above. Therefore, independent claim 32 is patentable over Graham for at least the same reasons explained above in connection with independent claim 1.

8. Independent claim 33

Independent claim 3 has been amended and now recites:

> Claim 33 (previously presented): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:
>
> accessing a sequence of objects segmented into clusters each including multiple constituent objects arranged in a respective sequence in accordance with context-related meta data associated with the objects;
>
> selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence; and
>
> in a user interface, graphically presenting the selected representative objects of each cluster without graphically presenting representations of unselected ones of the constituent objects of the clusters.

The rejection of claim 33 under 35 U.S.C. § 102(b) over Graham should be withdrawn because Graham does not expressly nor inherently disclose each and every element of the claim.

For example, Graham does not expressly nor inherently disclose "selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence."

The Examiner has taken the position that Graham discloses this element of claim 33 on page 5, col. 2, lines 23-47 and page 6, col. 1, lines 37-49 (see page 17 of the final Office action). The Examiner has explained his position as follows (pages 7-8 of the final Office action; bold emphasis in original; underlines added):

> As taught by Graham in the section Creating Summaries on page 5, an alternative to scrolling is summarization as in FIG. 1 a and 1 b. Instead of displaying all images, a set of representative images is shown (Graham, Page 5, Col. 2-Lines 14-16). The input to Graham's summarization procedure is a set of sequential cluster C at level k in the hierarchy and a target T, the desire number of representative photographs (Graham, Page 5, Col. 2-Lines 23-25). The summarization procedure assigns one space to each cluster in C. If the total of one space to each cluster is M, the remaining T -M spaces is assigned to clusters

> in proportion to their sizes. As an example of creating the summarization of 3 clusters, C1 (including its children) has 20 photos, C2 has 10 and C3 has 5. After one slot is assigned for each cluster, the remaining 7 slots are assigned proportionally to C1-C3, e.g., 4 more to C1, 2 to C2 and 1 to C1. Thus, C1 gets 5 spaces, C2 get 3 and C3 get 2 (Graham, Page 5, Col. 2-Lines 35-47). To select summarization photographs for the assigned spaces, <u>representative images are chosen by looking for the smallest time difference and largest time differences between consecutive photographs.</u> For example, if 4 summary photos are needed, 1 of closest photos and 3 of largest difference are selected (Graham, Page 6, Col. 1-Lines 37-49).
>
> In view of Graham's teaching of assigning spaces for C1, C2 and C3 and selecting summarization photographs for assigned space, C1 has 1 photograph representing the smallest time difference and 4 photos representing the largest time differences. C2 has 1 photograph representing the smallest time difference and 2 photos representing the largest time differences. C3 has 1 photograph representing the smallest time difference and 1 photo representing the largest time difference.
>
> The Graham's teaching as discussed indicates the step of **selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence**, e.g., for C3, at least 2 constituent photos (1 photograph representing the smallest time difference and 1 photo representing the largest time difference) representing beginning and ending instances in the corresponding photo sequence of C3, which is 5 photos.

Contrary to the Examiner's position, however, the cited sections of Graham do not expressly nor inherently disclose "selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence," as recited in claim 33. In particular, Graham discloses the following options for selecting representative images in a cluster: (1) select one photograph from a set of consecutive images that are separated by the smallest difference in time; (2) select photographs before or after the largest separation between consecutive photographs; and (3) select the image that best represents the visual characteristics of the cluster (see page 6, col. 1). None of these methods constitutes "selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence." Indeed, the set of consecutive images separated by the smallest difference in time may occur anywhere in the image sequence of the cluster, the largest separation

between consecutive photographs may occur anywhere in the image sequence of the cluster, and the image that best represents the visual characteristics of the cluster may occur anywhere in the image sequence of the cluster. Thus, Graham does not expressly nor inherently disclose "selecting *for each object cluster* at least two constituent objects representative of beginning and ending instances in the corresponding object sequence," as recited in claim 33.

For at least these reasons, the rejection of claim 33 under 35 U.S.C. § 102(b) over Graham should be withdrawn.

<u>9. Claims 33-37 and 39-49</u>

Each of claims 33-37 and 39-49 incorporates the elements of independent claim 33 and therefore is patentable over Graham for at least the same reasons explained above.

<u>10. Independent claim 51</u>

Independent claim 51 recites elements that essentially track the pertinent elements of independent claim 33 discussed above. Therefore, independent claim 51 is patentable over Graham for at least the same reasons explained above in connection with independent claim 1.

<u>B. Claim rejections under 35 U.S.C. § 103(a)</u>

Claims 20, 38, and 50 are rejected under 35 U.S.C. § 103(a) over Graham ("Time as Essence for Photo Browsing Through Personal Digital Libraries").

<u>1. Applicable standards for sustaining a rejection under 35 U.S.C. § 103(a)</u>

"A patent may not be obtained … if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103(a).

In an appeal involving a rejection under 35 U.S.C. § 103, an examiner bears the initial burden of establishing *prima facie* obviousness. See <u>In re Rijckaert</u>, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). To support a *prima facie* conclusion of obviousness,

the prior art must disclose or suggest all the limitations of the claimed invention.[1] See In re Lowry, 32 F.3d 1579, 1582, 32 USPQ2d 1 031, 1034 (Fed. Cir. 1994). If the examiner has established a *prima facie* case of obviousness, the burden of going forward then shifts to the applicant to overcome the *prima facie* case with argument and/or evidence. Obviousness, is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. This inquiry requires (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. See KSR Int'l Co. v. Teleflex Inc., No. 127 S. Ct. 1727, 1728 (2007) (citing Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966)). If all claim limitations are found in a number of prior art references, the fact finder must determine whether there was an apparent reason to combine the known elements in the fashion claimed. See KSR, 1741. This analysis should be made explicit. KSR at 1741 (citing In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006): "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

2. Claim 20

Claim 20 incorporates the elements of independent claim 1 and therefore is patentable over Graham for at least the same reasons explained above in connection with claim 1.

Claim 20 also is patentable over Graham for the following additional reasons.

Claim 20 depends from claim 19 and recites that the processing further comprises processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end. Claim 19 recites that the processing comprises processing each of the candidate objects sequentially beginning at a first end of the object sequence.

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[1] The U.S. Patent and Trademark Office has set forth the following definition of the requirements for establishing a *prima facie* case of unpatentability (37 CFR § 1.56(b)(ii)):

> A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

In support of the rejection of claim 20 the Examiner has taken the position that (page 22 of the final Office action; emphasis added):

> Regarding claim 20, Graham teaches all of the claimed subject matter as discussed above with respect to claim 19, Graham does not teach the step of processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end. However, <u>clustering the image by iterating the sorted list at the other end of the list is not different from the first end.</u> Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to iterate the sorted list at the other end in order to cluster the images.

As noted above, claim 20 depends from claim 19. Therefore, claim 20 comprises processing each of the candidate objects sequentially beginning at a first end of the object sequence and processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end.

In the rationale given by the Examiner in support of the rejection of claim 20, the Examiner only has argued that it would have been obvious to process the images beginning from one end. Therefore, the Examiner has not established a *prima facie* case that one skilled in the art would have been led by Graham's disclosure or the knowledge generally available at the time the invention was made to process each of the candidate objects sequentially beginning at a first end of the object sequence and to process each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end. In fact, based on the Examiner's assertion that "clustering the image by iterating the sorted list at the other end of the list is not different from the first end," one skilled in the art would not have had any motivation whatsoever for processing each of the candidate objects sequentially beginning at a first end of the object sequence and processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end, as required by claim 20.

For at least this additional reason, the rejection of claim 20 under 35 U.S.C. § 103(a) over Graham should be withdrawn.

3. Claim 38

Claim 38 incorporates the elements of independent claim 33 and therefore is patentable over Graham for at least the same reasons explained above in connection with claim 33.

Claim 38 also is patentable over Graham for the following additional reasons.

Claim 38 depends from claim 37 and recites that objects of one cluster are merged into an adjacent cluster in response to dragging and dropping of the objects to be merged.

In support of the rejection of claim 38 the Examiner has acknowledged that Graham does not disclose the elements of claim 38 (see page 23 of the final Office action). In an effort to make-up for this lack of disclosure, the Examiner has argued that (page 23 of the final Office action):

> However, the Calendar Browser as disclosed by Graham must be implemented in a computer system with a conventional operating system such as Window XP (Graham, Page 1, Col. 2 Lines 12-21). By using Window XP, an object can be dragged and dropped from a folder to another folder.
>
> Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include the feature of dragging and dropping of Window XP into the Calendar Browser in order to manipulate objects between folders.

Contrary to the Examiner's assumption, the mere dragging and dropping of individual files from one folder to another as enabled by the file system provided in the Windows XP operating system would not have led one skilled in the art to modify Graham's Calendar Browser to enable users to change the clustering of images determined by Graham's system. Indeed, the individual clusters do not constitute respective folders that are accessible by the Windows XP file system; instead, they are data structures that are maintained by Graham's Calendar Browser software application.

For at least this additional reason, the rejection of claim 38 under 35 U.S.C. § 103(a) over Graham should be withdrawn.

4. Claim 50

Claim 50 incorporates the elements of independent claim 33 and therefore is patentable over Graham for at least the same reasons explained above in connection with claim 33.

Claim 50 also is patentable over Graham for the following additional reasons.

Claim 50 depends from claim 33 and recites that the method further comprises graphically presenting at least one link to an object of a cluster arranged in a sequence in accordance with location-related meta data in a map format.

In support of the rejection of claim 38 the Examiner has acknowledged that Graham does not disclose the elements of claim 50 (see page 23 of the final Office action). In an effort to make-up for this lack of disclosure, the Examiner has argued that (page 23 of the final Office action; emphasis added):

> However, as suggested by Graham, the location where a photograph was taken could also be extracted from the image files and introduces as a clustering criterion (Graham, Page 3, Col. 2 Line 36-Page 4, Col. 1 Line 2).
>
> Thus by using location for clustering, the location is used to name a folder and the process of linking is similar to FIG. 1 a-b. A folder naming by location indicates a map format.

The cited sections of Graham only suggest in pertinent part that GPS metadata "could also be extracted" and that "It is equally easy to cluster the data based on location." Contrary to the Examiner's assumption, Graham does not disclose that "the location is used to name a folder." Graham does not disclose how the data that "could" clustered by location might be named. Moreover, merely naming of a cluster does not "indicate a map format." In accordance with its ordinary and accustomed meaning, the term "map" means "a representation usu. on a flat surface of the whole or part of an area" (definition 1a, Merriam-Webster's Collegiate Dictionary, Tenth Edition 1995). In addition, in the linking scheme described in Graham, the only link to an object that is graphically presented is the link to an image selected at the day granularity (see page 3, col. 1, second full ¶). The day granularity calendar view does not disclose or suggest a cluster arranged in a sequence in accordance with location-related meta data in a map format.

For at least these additional reasons, the rejection of claim 50 under 35 U.S.C. § 103(a) over Graham should be withdrawn.

VIII. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

Date: November 11, 2009

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CLAIMS APPENDIX

The claims that are the subject of Appeal are presented below.

Claim 1 (previously presented): A method of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects, comprising operating a processor to perform operations comprising:

classifying the objects in the sequence to generate a series of object clusters, wherein the classifying comprises sequentially processing each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series and, for each of the candidate objects,

determining a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster, the candidate object interval being measured in the selected dimension of the context-related metadata,

comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and

comparing the candidate object interval to a weighted measure of object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata.

Claim 2 (previously presented): The method of claim 1, wherein the measure of cluster extent for each current object cluster corresponds to a temporal distance spanned by recorded generation times associated with all objects in the current object cluster.

Claim 3 (previously presented): The method of claim 1, wherein the measure of cluster extent for each current object cluster corresponds to a spatial distance spanned by recorded generation locations associated with all objects in the current object cluster.

Claim 4 (previously presented): The method of claim 1, wherein the measure of object density for each current object cluster corresponds to an average temporal distance separating adjacent objects in the current object cluster.

Claim 5 (previously presented): The method of claim 1, wherein the measure of object density for each current object cluster corresponds to an average spatial distance separating adjacent objects in the current object cluster.

Claim 6 (previously presented): The method of claim 1, wherein the classifying comprises merging consecutive ones of the candidate objects into a current one of the object clusters until the candidate object interval determined for a current one of the candidate objects exceeds the weighted measure of cluster extent for the current cluster, at which point a successive one of the object clusters in the series is initiated with the current candidate object.

Claim 7 (previously presented): The method of claim 1, wherein the classifying comprises merging consecutive ones of the candidate objects into a current one of the object clusters until the candidate object interval determined for a current one of the candidate objects exceeds the weighted measure of object density for the current object cluster, at which point a successive one of the object clusters in the series is initiated with the current candidate object.

Claim 8 (previously presented): The method of claim 1, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 9 (previously presented): The method of claim 1, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 10 (previously presented): The method of claim 1, further comprising customizing at least one of the weights applied to the measures of cluster extent based on an analysis of objects in the corresponding object cluster.

Claim 11 (previously presented): The method of claim 10, wherein the customizing comprises scaling at least one of the weights applied to the measures of cluster extent based on a fractal dimension estimate of recorded time generation meta data associated with the objects in the collection.

Claim 12 (previously presented): The method of claim 1, further comprising customizing at least one of the weights applied to the measures of cluster object density based on an analysis of objects in the corresponding object cluster.

Claim 13 (previously presented): The method of claim 12, wherein the customizing comprises scaling at least one of the weights applied to the measures of cluster extent based on a fractal dimension estimate of recorded time generation meta data associated with the objects in the collection.

Claim 14 (previously presented): The method of claim 1, wherein the processing further comprises comparing the object density of a candidate object cluster consisting of the current object cluster and the candidate object with the weighted measure of object density for the current object cluster.

Claim 15 (previously presented): The method of claim 14, wherein the measure of object density for each current object cluster corresponds to an average temporal distance separating adjacent objects in the current object cluster.

Claim 16 (previously presented): The method of claim 14, wherein the measure of object density for each current object cluster corresponds to an average spatial distance separating adjacent objects in the current object cluster.

Claim 17 (previously presented): The method of claim 14, wherein the measure of object density for each object cluster corresponds to a moving average distance separating adjacent objects in the current object cluster.

Claim 18 (previously presented): The method of claim 14, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 19 (previously presented): The method of claim 1, wherein the processing comprises processing each of the candidate objects sequentially beginning at a first end of the object sequence.

Claim 20 (previously presented): The method of claim 19, wherein the processing further comprises processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end.

Claim 21 (previously presented): The method of claim 1, wherein the sequence to be segmented includes objects of the following types: text, audio, graphics, still images, video and business events.

Claim 22 (previously presented): A system of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the memory, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

classifying the objects in the sequence to generate a series of object clusters, wherein the segmentation engine is operable to sequentially process each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series and, for each of the candidate objects, perform operations comprising

determining a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster, the candidate object interval being measured in the selected dimension of the context-related metadata,

compare the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and

comparing the candidate object interval to a weighted measure of cluster object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata.

Claim 23 (previously presented): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:

segmenting objects from the collection into clusters;

extracting context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy; and

assigning names to clusters based on the extracted context-related meta data corresponding to a level of the name hierarchy selected to distinguish segmented clusters from one another.

Claims 24-26 (canceled)

Claim 27 (previously presented): The method of claim 23, wherein the context-related meta data corresponds to recorded information relating to country, city, and state of object generation.

Claim 28 (original): The method of claim 23, wherein the context-related meta data corresponds to both object generation times and object generation locations.

Claim 29 (original): The method of claim 23, further comprising automatically naming objects in a given cluster based on the name assigned to the given cluster.

Claim 30 (original): The method of claim 29, wherein the objects in the given cluster are named automatically in accordance with a chronological ordering of the objects in the given cluster.

Claim 31 (original): The method of claim 29, further comprising storing objects in the given cluster in a tree structure organized by cluster and labeled in accordance with the assigned names.

Claim 32 (previously presented): A system of organizing a collection of objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the memory, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

segmenting objects from the collection into clusters; and

extracting context-related meta data corresponding to object generation locations associated with the objects and parsable into multiple levels of a name hierarchy, and assign names to each cluster based on the extracted context-related meta data corresponding to a level of the name hierarchy selected to distinguish segmented clusters from one another.

Claim 33 (previously presented): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:

accessing a sequence of objects segmented into clusters each including multiple constituent objects arranged in a respective sequence in accordance with context-related meta data associated with the objects;

selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence; and

in a user interface, graphically presenting the selected representative objects of each cluster without graphically presenting representations of unselected ones of the constituent objects of the clusters.

Claim 34 (previously presented): The method of claim 33, further comprising graphically presenting a selected one of the clusters as a stack of partially overlapping images representative of multiple objects in the selected cluster.

Claim 35 (previously presented): The method of claim 34, further comprising revealing an increased portion of a given one of the representative images in the stack in response to detection of a user-controlled display icon positioned over the given representative image.

Claim 36 (previously presented): The method of claim 33, wherein the presenting comprises presenting the selected representative objects with the spacing between adjacent ones of the selected representative objects in the same cluster smaller than the spacing between adjacent ones of the selected representative objects in different clusters.

Claim 37 (original): The method of claim 33, further comprising merging objects of one cluster into an adjacent cluster in response to user input.

Claim 38 (original): The method of claim 37, wherein objects of one cluster are merged into an adjacent cluster in response to dragging and dropping of the objects to be merged.

Claim 39 (original): The method of claim 37, wherein the objects of the one cluster are merged into the adjacent cluster in response to user selection of an icon for merging the clusters.

Claim 40 (original): The method of claim 33, further comprising presenting a graphical representation of distributions of objects in the clusters.

Claim 41 (original): The method of claim 40, wherein a object distribution for a given cluster is presented as object instances plotted along an axis corresponding to a scaled representation of the context-related extent spanned by the given cluster.

Claim 42 (original): The method of claim 40, further comprising splitting a given cluster in response to user selection of a point in the representation of the object distribution presented for the given cluster.

Claim 43 (original): The method of claim 40, further comprising automatically splitting a given cluster into two or more clusters in response to user input.

Claim 44 (original): The method of claim 43, wherein the given cluster is automatically split into a user-selected number of sub-clusters.

Claim 45 (original): The method of claim 43, wherein the given cluster is automatically split based on relative sizes of intervals between successive objects in the given cluster.

Claim 46 (original): The method of claim 33, wherein the context-related meta data corresponds to object generation times.

Claim 47 (original): The method of claim 33, wherein the context-related meta data corresponds to object generation locations.

Claim 48 (original: The method of claim 33, wherein the segmented sequence includes objects of the following types: text, audio, graphics, still images, video, and business events.

Claim 49 (original): The method of claim 33, further comprising graphically presenting at least one link to an object of a cluster arranged in a sequence in accordance with time-related meta data in a calendar format.

Claim 50 (original): The method of claim 33, further comprising graphically presenting at least one link to an object of a cluster arranged in a sequence in accordance with location-related meta data in a map format.

Claim 51 (previously presented): A system of organizing a collection of objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the memory, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

accessing a sequence of objects from the collection segmented into clusters each including multiple objects arranged in a respective sequence in accordance with context-related meta data associated with the objects;

selecting for each object cluster at least two constituent objects representative of beginning and ending instances in the corresponding object sequence; and

in a user interface, graphically presenting the selected representative objects of each cluster on a screen without graphically presenting representations of unselected ones of the constituent objects of the clusters, wherein the user interface layout engine presents the selected representative objects with the spacing between adjacent ones of the selected representative objects in the same cluster smaller than the spacing between adjacent ones of the selected representative objects in different clusters.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 CFR §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the pending appeal. Therefore, no copies are required under 37 CFR § 41.37(c)(1)(ix) in the pending appeal.

RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any decisions rendered by a court or the Board that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal. Therefore, no copies are required under 37 CFR § 41.37(c)(1)(x) in the pending appeal.